

Montana Department of Natural Resources and Conservation  
Water Resources Division  
Water Rights Bureau

**ENVIRONMENTAL ASSESSMENT**  
**For Routine Actions with Limited Environmental Impact**

**Part I. Proposed Action Description**

1. Applicant/Contact name and address: **Northwestern Corporation  
PO Box 1155  
Helena, MT 59624-1155**
2. Type of action: **Beneficial Water Use Permit Application No. 41Q 30148072**
3. Water source name: **Missouri River**
4. Location affected by project: **SESW Sec 17 Twp 21N Rge 5E Cascade Co (includes Gov Lot 2 in SESW Sec 17) (dam extends into the NENW Sec 20 Twp 21N Rge 5E Cascade Co)**
5. Narrative summary of the proposed project, purpose, action to be taken, and benefits:

**The Applicant proposes to appropriate water from the Missouri River from January 1 through December 31 for non-consumptive, hydroelectric power generation purposes. Applicant proposes to modify its existing Ryan Hydroelectric Development (Ryan Dam) to increase its power generation capacity by installing six new turbines and four new generator rewinds. After the upgrades are complete, the combined flow rate of all plant diversions will be 7,200 cubic feet per second (CFS). Applicant has an existing water right (41Q 94367) to Ryan Dam for power generation which has a flow rate of 5,900 CFS and a volume up to 4,271,600 acre-feet (AF) per year. Applicant is requesting an increase in flow rate of 1,300 CFS and volume of up to 941,200 AF to cover the increase in hydraulic and energy production capacities from the plant upgrades. The total energy generated after the upgrades are in place will be 72 megawatts (MW).**

6. Agencies consulted during preparation of the Environmental Assessment:  
(include agencies with overlapping jurisdiction)

**Dept. of Environmental Quality Website – Clean Water Act Information Center  
MT. National Heritage Program Website - Species of Concern  
USDI Fish & Wildlife Service Website - Endangered and Threatened Species  
USDI Fish & Wildlife Service – Wetlands Online Mapper  
USDA Natural Resources Conservation Service – Web Soil Survey**



## **Part II. Environmental Review**

### **1. Environmental Impact Checklist:**

#### **PHYSICAL ENVIRONMENT**

##### **WATER QUANTITY, QUALITY AND DISTRIBUTION**

**Water quantity** - Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.

**Determination:**            **No Significant Impact**

According to the Applicant, during the Federal Energy Regulatory Commission (FERC) relicensing process in 1999/2000, its September 1999 Final Environmental Impact Statement (FEIS) addressed potential impacts to the Missouri River from the Applicant's hydropower projects in the Great Falls area. Environmental impacts from the Applicant's Ryan Dam improvements have also been addressed in two specific amendments approved by FERC in 2012 and 2017. The orders approved by FERC generally state that the upgrades to the turbines and generators are considered to be maintenance and conclude that the proposed amendments do not affect environmental resources beyond those

previously analyzed for the project. The increase in flow capacity for the project would have no measurable effect on the environment.

The source of water associated with this change is the Missouri River in Cascade County. Available resources do not identify the reach of river adjacent to Ryan Dam as being dewatered. This project is for non-consumptive, hydroelectric power generation purposes at Ryan Dam and the Applicant has existing water rights for non-consumptive use upstream and downstream at Cochrane and Morony Dams with larger flow rates than is being permitted at Ryan Dam.

**Water quality** - Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.

*Determination:*                    **No Significant Impact**

The DEQ website shows that the reach of the Missouri River near Ryan Dam does have impairments that inhibit the streams ability to support beneficial use for Drinking Water and Aquatic Life. The impairments are predominately caused by natural sources and past mining activity. There is a low likelihood that water quality will be adversely affected as a result of this project, the project will simply run more water through the powerhouse to generate more hydropower.

**Groundwater** - Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.

*Determination:*                    **No Significant Impact**

No impacts to groundwater are anticipated. The source is the Missouri River and the project is for non-consumptive, hydroelectric power generation purposes at Ryan Dam.

**DIVERSION WORKS** - Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.

*Determination:*                    **No Significant Impact**

FERC-approved upgrades include the installation of six new turbines (at 1,200 CFS in capacity each) and four new generator rewinds that will increase the total energy generated at the facility to 72 MW. The proposed permit will not involve a modification to the diversion works and other than managing an additional 1,300 CFS through the powerhouse, no impacts are expected.

#### **UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES**

**Endangered and threatened species** - Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater,

*assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or “species of special concern.”*

**Determination: No Significant Impact**

**The Montana National Heritage Program lists six Species of Concern and one Special Status Species within Township 21 North, Range 5 East. The Special Status Species is the Bald Eagle. Common names for the two mammals are the Merriam’s Shrew and the Grizzly Bear. Common names for the two reptiles are Spiny Softshell (turtle) and the Greater Short-horned Lizard. Common names for the two fish species are the Blue Sucker and Sauger. No plants species are identified on the website within Township 21 North, Range 5 East.**

**The United States Department of Interior Fish and Wildlife Service lists the following species as threatened in Cascade Co: Canada Lynx, Red Knot, Piping Plover, and Grizzly Bear. It lists the Pallid Sturgeon as endangered. The Wolverine is listed as proposed and Whitebark Pine is listed as candidate. Although these species are identified in Cascade Co because one would reasonably expect them to occur there, not all of the identified species are necessarily found in the area of the proposed permit.**

**No impacts to any of these species are expected as this permit application proposes to modify turbines and generators in the Ryan Dam powerhouse. The dams’ diversion infrastructure will not change and has been in place many years.**

**The proposed project is not located in general sage grouse habitat therefore the Applicant does not have to consult with the Sage Grouse Habitat Conservation Program or obtain a letter regarding the consultation.**

**Wetlands - Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.**

**Determination: No Significant Impact**

**The National Wetlands Inventory website shows Riverine Habitat adjacent to Ryan Dam. The wetland habitat should not be significantly impacted as a result of this proposed permit.**

**Ponds - For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.**

**Determination: No Significant Impact**

**There are no changes proposed to the reservoir located at Ryan Dam and no impact to wildlife, waterfowl, or fisheries are anticipated.**

**GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE** - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

*Determination:*           **No Significant Impact**

**The proposed use of water will be for non-consumed power generation. No impacts to the soil profile will occur, all impacts to infrastructure are occurring inside the powerhouse at Ryan Dam.**

**VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS** - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

*Determination:*           **No Significant Impact**

**The proposed permit will use water for non-consumed power generation. No impacts to vegetation will occur as all impacts to infrastructure are occurring inside the powerhouse at Ryan Dam.**

**AIR QUALITY** - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

*Determination:*           **No Significant Impact**

**No impacts to air quality or adverse effects to vegetation are expected as a result of this proposal. Water from the proposed permit will be used for non-consumed power generation.**

**HISTORICAL AND ARCHEOLOGICAL SITES** - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project if it is on State or Federal Lands. If it is not on State or Federal Lands simply state NA-project not located on State or Federal Lands.*

*Determination:*           **No Significant Impact**

**Project is proposing to modify interior infrastructure for power generation. No impacts to historical or archeological sites are anticipated because of this proposal.**

**DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY** - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

*Determination:*           **No Significant Impact**

**No additional impacts are anticipated.**

<b>HUMAN ENVIRONMENT</b>
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**LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS** - Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.

Determination: **No Significant Impact**

**No locally adopted environmental plans or goals have been identified.**

**ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES** - Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.

Determination: **No Significant Impact**

**The proposed action should not negatively impact recreational activities in the area.**

**HUMAN HEALTH** - Assess whether the proposed project impacts on human health.

Determination: **No Significant Impact**

**No impacts to human health have been identified.**

**PRIVATE PROPERTY** - Assess whether there are any government regulatory impacts on private property rights.

Yes\_\_\_ No X If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.

Determination: **No Significant Impact**

**OTHER HUMAN ENVIRONMENTAL ISSUES** - For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.

Impacts on:

- (a) Cultural uniqueness and diversity? **None**
- (b) Local and state tax base and tax revenues? **Increased profits from marketing more power could raise tax revenues**
- (c) Existing land uses? **None**
- (d) Quantity and distribution of employment? **None**
- (e) Distribution and density of population and housing? **None**
- (f) Demands for government services? **None**
- (g) Industrial and commercial activity? **None**
- (h) Utilities? **Additional power will be generated at Ryan Dam**
- (i) Transportation? **None**

(j) Safety? **None**

(k) Other appropriate social and economic circumstances? **None**

2. *Secondary and cumulative impacts on the physical environment and human population:*

Secondary Impacts – **No secondary impacts have been identified.**

Cumulative Impacts – **No cumulative impacts have been identified.**

3. *Describe any mitigation/stipulation measures:*

**No Mitigation or Stipulation Measures have been identified.**

4. *Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:*

**No action alternative: Deny the application. This alternative would result in no modification to hydropower operations at Ryan Dam.**

### *PART III. Conclusion*

#### *1. Preferred Alternative*

The preferred alternative is the proposed alternative.

#### *2 Comments and Responses*

None Received.

#### *3. Finding:*

Yes\_\_\_ No X Based on the significance criteria evaluated in this EA, is an EIS required?

*If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action:*

**None of the identified impacts for any of the alternatives are significant as defined in ARM 36.2.524.**

*Name of person(s) responsible for preparation of EA:*

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Lewistown Regional Office  
01/11/2021